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## NOTICE OF ALLOWANCE AND FEE(S) DUE

23353 7590 06/25/2010

RADER FISHMAN & GRAUER PLLC  
LION BUILDING  
1233 20TH STREET N.W., SUITE 501  
WASHINGTON, DC 20036

EXAMINER

PAN, HANG

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 06/25/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,090	07/19/2005	Hironaka Nagashima	IRD-0001	5497

TITLE OF INVENTION: PROGRAM AUTOMATIC CONVERTING METHOD AND PROGRAM AUTOMATIC CONVERTING DEVICE

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$755	\$300	\$0	\$1055	09/27/2010

**THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

**THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
**Commissioner for Patents**  
**P.O. Box 1450**  
**Alexandria, Virginia 22313-1450**  
 or Fax **(571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

23353 7590 06/25/2010

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**LION BUILDING**  
**1233 20TH STREET N.W., SUITE 501**  
**WASHINGTON, DC 20036**

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop [ISSUE FEE] address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,090	07/19/2005	Hironaka Nagashima	IRD-0001	5497

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nonprovisional	YES	\$755	\$300	\$0	\$1055	09/27/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
PAN, HANG	2193	717-137000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1079 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1079 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/518,090

**Examiner**

HANG PAN

**Applicant(s)**

NAGASHIMA ET AL.

**Art Unit**

2193

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on March 23, 2010.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

/H. P./  
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./  
Supervisory Patent Examiner, Art Unit 2193

### **DETAILED ACTION**

This office action is in response applicant's amendment filed on March 23, 2010.

Claims 1-10 are pending.

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Brian Dutton (reg. No. 47255) on May 18, 2010.

The claims have been amended as follows:

1. (Currently Amended) An automatic program conversion method for making a program running in one environment executable in other environments, said conversion method comprising:

where at least one pair of a first instruction pattern information element representing an instruction pattern in an old source program and a second instruction pattern information element representing an instruction pattern in a new source program is stored in a memory part,

an analysis step of analyzing, using an analysis means, a number of times that said first instruction pattern information element appears in said old source program;

an analysis results output step of outputting, using an output means, analysis results obtained in said analysis step;

an instruction pattern conversion step of automatically converting, using a conversion means, descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;

a new program output step of outputting, using an output means, a new source program resulting from said old source program having been converted in said instruction pattern conversion step; and

an input receiving step of receiving input, manually entered by a user using an input means, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program.

2. (Original) The automatic program conversion method as defined in claim 1, wherein said new program output step outputs said descriptions, having been converted

in said instruction pattern conversion step, visually distinct from unconverted descriptions, in said new source program.

3. (Currently Amended) A computer program stored in a program storage part, the program performing:

where at least one pair of a first instruction pattern information element representing an instruction pattern in an old source program and a second instruction pattern information element representing an instruction pattern in a new source program is stored in a computer, an analysis step of analyzing a number of times that said first instruction pattern information element appears in said source program;

an analysis results output step of outputting analysis results obtained in said analysis step;

an instruction pattern conversion step of automatically converting descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;

a new program output step of outputting a new program resulting from said old source program having been converted in said instruction pattern conversion step; and

an input receiving step of receiving input manually entered by a user, regarding descriptions in said old source program that correspond to said first instruction pattern

information element analyzed, in said analysis step, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program.

4. (Original) The program as defined in claim 3, wherein said new program output step outputs said descriptions, having been converted in said instruction pattern conversion step, visually distinct from unconverted descriptions, in said new source program.

5. (Currently Amended) An automatic program conversion device comprising: an instruction pattern correspondence information storage part, wherein at least one pair of a first instruction pattern information element representing an instruction pattern in an old source program and a second instruction pattern information element representing an instruction pattern in a new source program is stored;

an analysis part for analyzing a number of times that said first instruction pattern information element appears in said source program;

an analysis results output part for outputting analysis results obtained in said analysis part;

an instruction pattern conversion part for automatically converting descriptions in said source program that correspond to said first instruction pattern information element analyzed, in said analysis part, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired



with said first instruction pattern information element appearing said predetermined number of times or more;

a new program output part for outputting a new source program resulting from said old source program having been converted in said instruction pattern conversion part; and

an input receiving part for receiving input manually entered by a user, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis part, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program.

6. (Original) The automatic program conversion device as defined in claim 5, wherein said new program output part outputs said descriptions, having been converted in said instruction pattern conversion part, visually distinct from unconverted descriptions, in said source program.

7. (Currently Amended) A program creation method for creating a program capable of creating from an old source program running in one environment a new source program executable in other environments, said method comprising:

an analysis step of analyzing a number of times that at least one first instruction pattern information element appears in said old source program;

an analysis results output step of outputting analysis results obtained in said analysis step;

an instruction pattern conversion step of automatically converting descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to a second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;

a new program output step of outputting said new source program resulting from said old source program having been converted in said instruction pattern conversion step; and

an input receiving step of receiving input manually entered by a user, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program.

8. (Original) The program creation method as defined in claim 7, wherein said new program output step outputs said descriptions, having been converted in said instruction pattern conversion step, visually distinct from unconverted descriptions, in said new source program.

9. (Currently Amended) A program creation device for creating a program capable of creating from an old source program running in one environment a new source program executable in other environments, said device comprising:

an instruction pattern correspondence information storage part, wherein at least one pair of a first instruction pattern information element representing an instruction pattern in said old source program and a second instruction pattern information element representing an instruction pattern in said new source program is stored;

an analysis part for analyzing a number of times that said first instruction pattern information element appears in said source program;

an analysis results output part for outputting analysis results obtained in said analysis part;

an instruction pattern conversion part for automatically converting descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis part, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;

a new program output part for outputting said new source program resulting from said old source program having been converted in said instruction pattern conversion part; and

an input receiving part for receiving input manually entered by a user, regarding descriptions in said old source program that correspond to said first instruction pattern

information element analyzed, in said analysis part, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program.

10. (Original) The program creation device as defined in claim 9, wherein said new program output part outputs said descriptions, having been converted in said instruction pattern conversion part, visually distinct from unconverted descriptions, in said source program.

#### **STATEMENT OF REASONS FOR ALLOWANCE**

Claims 1-10 are allowed.

The following is an examiner's statement of reasons for allowance:

All claims are directed toward a method of translating an old source program into a new source program by automatically mean or manual mean based on the number of appearance of each instruction pattern. The claims recite the limitations of

**“where at least one pair of a first instruction pattern information element representing an instruction pattern in an old source program and a second instruction pattern information element representing an instruction pattern in a new source program is stored in a memory part,**

**an analysis step of analyzing, using an analysis means, a number of times that said first instruction pattern information element appears in said old source program;**

**an analysis results output step of outputting, using an output means, analysis results obtained in said analysis step;**

**an instruction pattern conversion step of automatically converting, using a conversion means, descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;**

**a new program output step of outputting, using an output means, a new source program resulting from said old source program having been converted in said instruction pattern conversion step; and**

**an input receiving step of receiving input, manually entered by a user using an input means, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program”.**

Krapf et al. (US 6901588) teach a user can manually port a program from a source format to a target format. Breternitz (US 6044220) teaches a compiler can either interpret a source code or translate the source code, when an instruction appears more than a threshold number of times, the compiler translates the instruction to native code for execution, else compiler would interpret the instruction to execute it. However, after extensive searches, the examiner has not been able to find any prior art to cover the limitations of

**"an instruction pattern conversion step of automatically converting, using a conversion means, descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing a predetermined number of times or more, so as to correspond to said second instruction pattern information element that is paired with said first instruction pattern information element appearing said predetermined number of times or more;**

**an input receiving step of receiving input, manually entered by a user using an input means, regarding descriptions in said old source program that correspond to said first instruction pattern information element analyzed, in said analysis step, as appearing less than said predetermined number of times, so that said descriptions will be modified for said new source program".**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HANG PAN whose telephone number is (571)270-7667. The examiner can normally be reached on Mon-Fri, 8:30 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571)272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. P./  
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./  
Supervisory Patent Examiner, Art Unit 2193